

# SN3262 – Network Administration, Management and Security

## Exercise 3: Simple Network Management Monitoring Tool

Although this is a rather easy exercise here is an outline of the steps involved in solving the problem:

- First read the specification and then re-read it.
- Now ask yourself some questions.
  - What does continuously monitor mean?
  - How can you detect if a machine that is capable of responding is connected to the network?
- Now design your script i.e. express in words or pseudo-code the steps involved in the solution.
- Now write and test your script.

Here is A solution.

```
#!/bin/bash

#
# SN3262 - A simple solution to exercise 3
#

while true
do
    ping -c 1 -w 1 149.170.13.7 > /dev/null
    if [ $? == 0 ]
    then
        echo "149.170.13.7 is up"
    else
        echo "149.170.13.7 is down"
    fi
    sleep 10
done
```

continued

Here is another solution where the script takes the name or IP address of the machine to be monitored as a command line argument.

```
#!/bin/bash

#
# SN3262 - A solution to exercise 3 that takes a command line argument
#

# First test to see if you have an argument - if not print a usage message

if [ $# != 1 ]
then
    echo "one argument required"
    echo "usage: $0 IP address or machine name"
    echo "      e.g. $0 149.170.13.8 or $0 hardy"
else
    while true
    do
        ping -c 1 -w 1 $1 > /dev/null
        if [ $? == 0 ]
        then
            echo "$1 is up"
        else
            echo "$1 is down"
        fi
        sleep 10          # wait for ten seconds
    done
fi
```